

# The Ballarat Naturalist

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## **Native Terrestrial Orchids – More questions than answers: B J Johnson**

B.J. grew up in Michigan U.S.A. but came to Australia in 1972 to teach field studies in Jindabyne. She then met Carol Hall who was also teaching there and they shared similar interests. During her lifetime B.J. has travelled extensively around the world, volunteering to assist conservation matters. In 2005 B.J. travelled to Western Australia, in July, to admire the extensive vistas of wildflowers and whilst admiring the colourful daisies discovered and was captivated by our native terrestrial orchids. She admits to being rather obsessed by them. She now convenes a group of U3A orchid seekers and photographers, all of whom are keen to find the usually very small orchids.

The title of B.J.s presentation to our field naturalists group was Native Terrestrial Orchids – More questions than answers. B.J. explained a bit about orchids then led to suggesting where, as naturalists, we would be likely to find them, mostly in our local area, and included threats to orchids. Sunday's club excursion followed the talk by B.J. leading club members to seek likely places to search around Dereel and Enfield.

Her first point was where to find orchids. This involves understanding their growth requirements which include water, minerals and reproduction mechanisms including pollinators. The unique Australian environment was mentioned with its isolation, in many places harsh conditions and adaptation to fire. This was followed by ecosystems and biodiversity. Three types of biodiversity were mentioned. Genetic diversity being the variety of genetic information contained in individual plants and other organisms. Next was species diversity, the variety of species followed by ecosystem diversity, the variety of habitats, ecological communities and ecological processes. Ecosystem diversity was explained as having a macro perspective (climate, season, latitude, altitude, grasslands or forests etc.) and micro perspective (soil, aspect, hills, drainage, competition, grazing, canopy cover, and pollinators). Within genetic diversity as individuals, nine pictures of *Glossodia major* were shown, each slightly different in colour, form, petals, size or other differences.—page 2.

# Genetic diversity → individuals



Waxlip --*Glossodia major*

One major difference was the pure white one and an explanation of Hypochromics.

B.J. explained that travel around our country reveals that commonly used names in one locality differ from those elsewhere such as Victoria knowing waxlips as *Glossodia major*, but in ACT B.J. said they are called *Caladenia*.

## Hybrids

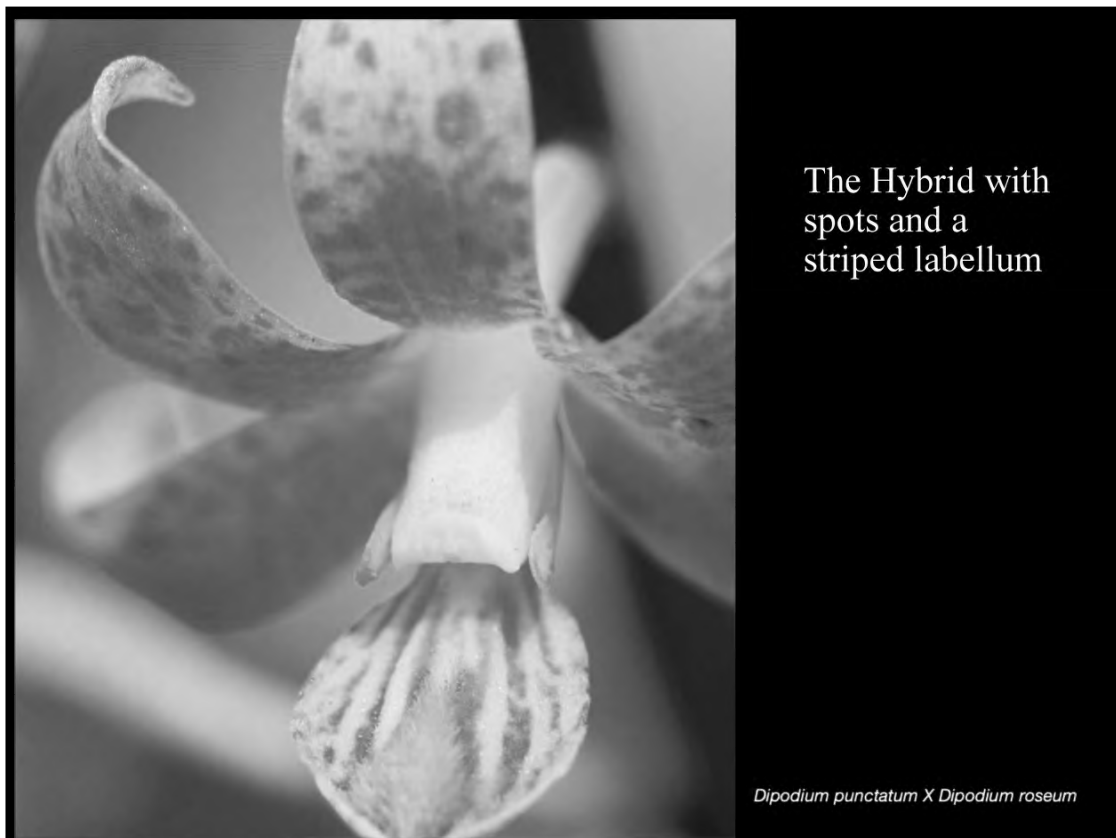
- Time
- Place
- Similar species
- Common pollinator



Rosy Hyacinth Orchid



Spotted hyacinth orchid

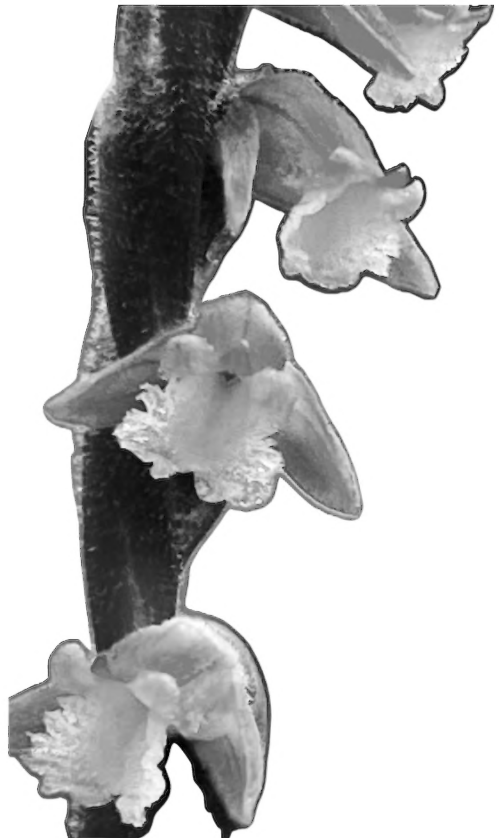


Hybrids were described as the disrupters. Hybridisation requires similar species to have a common pollinator, similar flowering time and location. The example given was hybridisation of hyacinth orchids. Rosy hyacinth orchid – *Dipodium rosium* and Spotted hyacinth orchid – *Dipodium punctatum* can be found in their pure version or as hybrids.

Orchids have evolved to use mycorrhizal systems to support their survival. Species require specific mycorrhizal activity in particular climate, terrain and bushland, in much the same way as fungi. Expecting removed orchids to survive is generally futile. Pollination often involves attraction of specific insects by mimicking pheromones. Some orchids have strong scents which B.J. suggests are often missed as we don't get down and smell them, but then she did say one smells like wet dogs so perhaps that is not surprising.

B.J. reminded us to take great caution to protect bush plants including orchids. We are all urged to take great care as we wander, to clean our shoes with appropriate disinfectant and ensure car and bike tyres are clean. It is best to walk on tracks to minimise the risk of trampling or compacting soil. Needless to say, removal of plants is prohibited. In fact, all native orchids are protected nationally. We are also to be aware of spreading specific information and photograph locations to minimise the risk of collectors looking to

harvest plants. As B.J. mentioned, the success rate of such gathering is extremely low, partly because of mycorrhizal connections in situ, which cannot be replicated after removal. Photographers can inadvertently harm plants by altering micro climates by moving leaves, bracken, twigs or weeds and thus creating frost risk or allowing possible animal nibbling. Seed gathering is also pointless without expert knowledge. B.J. says the seeds are tiny – like dust and sometimes need their mycorrhizal support in soil to facilitate germination.



Draining land has led to few Austral ladies tresses (*Spiranthes australis*) - above, as these require moist conditions.

Well meaning “revegetation” can fail by planting unsuitable trees, particularly monoculture. Land clearing for agriculture or housing has taken up much plant territory, but orchids also suffer from pesticides reducing pollinators, herbicides and super phosphate use, all sometimes wind spread or on machinery. Another problem causing orchid distress is the spread of exotic species, sometimes as garden escapees, sometimes deliberate planting. Examples include agapanthus and gazanias.

In Australia fire is a real threat. Over time, our bushland has evolved to cope with fire, including orchids. Some of these have tubers well below surface level, but some, like the tiny elbow orchid

(*Thynninorchis huntianus*) have very tiny tubers lying in surface litter. Deliberate burning is often done in autumn to reduce risks to our inhabited territory and before the onset of winter. However, this can disrupt the best time for plant survival. A better time may be after spring or summer flowering as nature would have done, so B.J. says more investigating is required. Some orchids require fire to flower such as red beaks (*Pyrochis nigricans*).

Not all orchids are welcome. In 1987 the South African weed orchid (*Disa bracteata*), arrived in Western Australia, moved across to South Australia and then to Victoria, now being found locally, including in Woowookarung. Removal is going to be a real challenge, if possible. They do not use or need pollinators. They can have multiple tubers – often two but up to five. Several years ago our club decided to remove as many as we could along the Shelford roadside area of significant native vegetation. The orchids need to be totally dug up, but sometimes they break, or leave some tubers. Angair decided to eliminate them from a defined area in Anglesea. In the first year they removed 200kg, the following year about half that amount and eventually succeeded in eliminating, but it was a defined area. Now we have them around Ballarat they are a big challenge as they are so vigorous and can out compete the native varieties we want to protect.

Once B.J. had explained orchid needs and suggested the kinds of terrain we might expect to find them, she showed approximately thirty beautifully photographed orchids. These began with some which have finished flowering for this year, some which are flowering now including Mayfly orchid (*Acianthus candatus*) and Mosquito orchid (*Acianthus pusillus*), some to be within weeks and some we won't see until early to mid summer, such as potato (*Gastrodia procera*) or hyacinth orchids (*Dipodium* sp.).

Claire and Peter Dalman



Hypochromic Wax  
Lip Orchid

### **Lots of Leaves in Dereel**

Following an overnight low of minus 3 and a chilly start to the day, we had a beautiful day for our August field trip hunting orchids in Dereel. We were led by orchid enthusiast BJ Johnson, who gave the presentation at our Friday night meeting. Our starting point was the Dereel Lagoon wetland reserve. This area suffered a bushfire in catastrophic conditions at the end of February this year. The fire fortunately was able to be brought under control quickly, but burned 110 hectares, which BJ informed us included the entire surface of the wetland.

As we walked through the blackened landscape, Roger pointed out various species germinating, including running postman. We saw a magpie building its nest in a blackened tree with no sign of regrowth. Perhaps it is a tree the magpies use every year, but this time there will be no leafy cover for the nest.

The chorus of frog calls from the wetland regrowth was an encouraging sound.



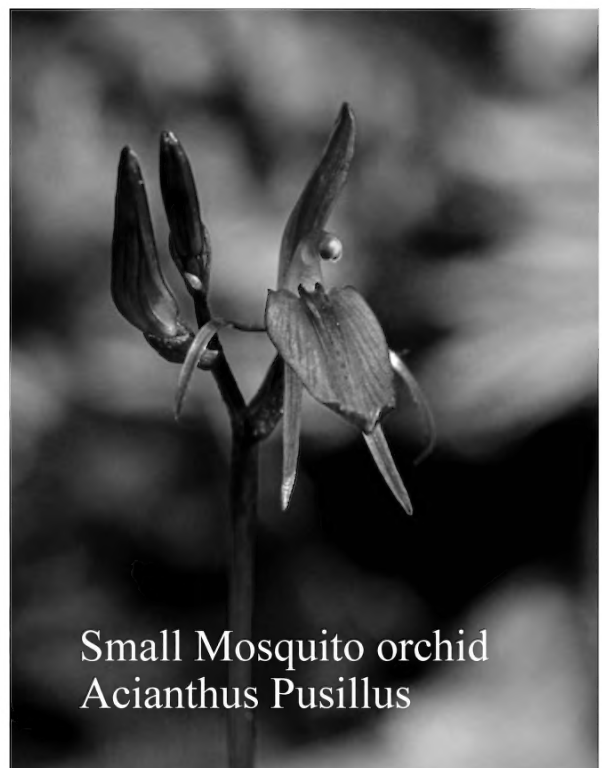
The bare tree branches made the birdlife easier to spot. We saw several white-eared honeyeaters and wondered what food they might find. Varied sitellas were a highlight for the bird enthusiasts.

Under the bracken regrowth we saw the leaves of many orchids, including Greenhoods, Helmet orchids, Acianthus species, Sun orchids, Waxlips and Caladenias, but no flowers.

It wasn't until after 11:30 that we finally found our first orchid flower, a Nodding greenhood (Right). Close by we found some scented sundews with flowers which were not quite open enough to take the prize for first open sundews of the year.



Our path extended into unburnt areas of the H27 bushland reserve. The trees are mainly Rough-barked Manna gums, with some messmate. Here we found Common heath in flower, some Small Mosquito orchids which had just finished, small Gnat orchids and a Slaty helmet orchid in flower. (below)



Small Mosquito orchid  
*Acianthus Pusillus*



After lunch, back at the Dereel Community Hall, where a female scarlet robin was seen, we car-pooled to the H26 bushland reserve. BJ showed us some trim greenhoods flowering right where we had parked, then a large patch of earthstars which were past their best, but still amazing to see in such quantities.



Trim Greenhood  
*Pterostylis concinna* inside and out

We learned about hazards to orchids when one of the patches BJ had wanted to show us had been uprooted by an echidna in search of a meal.

Along the trail we found Mayfly orchids and Tall greenhoods in flower.

A couple of "vegetable caterpillars", *Drechmeria gunnii*, and some multi-storey "pagoda" lichen were interesting non-orchid finds.

A mob of grey kangaroos were spotted.





"vegetable caterpillars",  
*Drechmeria gunnii*,



“pagoda” lichen

Bird sightings included a New Holland honeyeater, thornbills, Crimson rosella, White-naped honeyeater and a Goshawk which was heard, not seen. Under a large *Pinus radiata* where there appeared to be nothing growing, we were surprised when BJ pointed out to us a patch of Helmet orchid leaves among the pine needles.

Our last stop was a short drive away at another part of the H27 reserve, where Emily has seen Veined helmet orchids flowering in previous years.

We saw Red-beak orchid leaves, a patch of rock fern, a swamp gum in flower being visited by European honey bees, and some bright red *Russula* fungi, before finally one flowering Veined helmet orchid was discovered, also many Bronze Bird-orchid leaves with one almost flowering!



All the iNaturalist observations done on the day can be accessed from the link in the relevant journal post in our FNCB project: <https://www.inaturalist.org/projects/fncb-inaturalist> .

Many thanks to BJ for leading us to many orchid leaves, and quite a few orchid flowers, on this fascinating field trip.

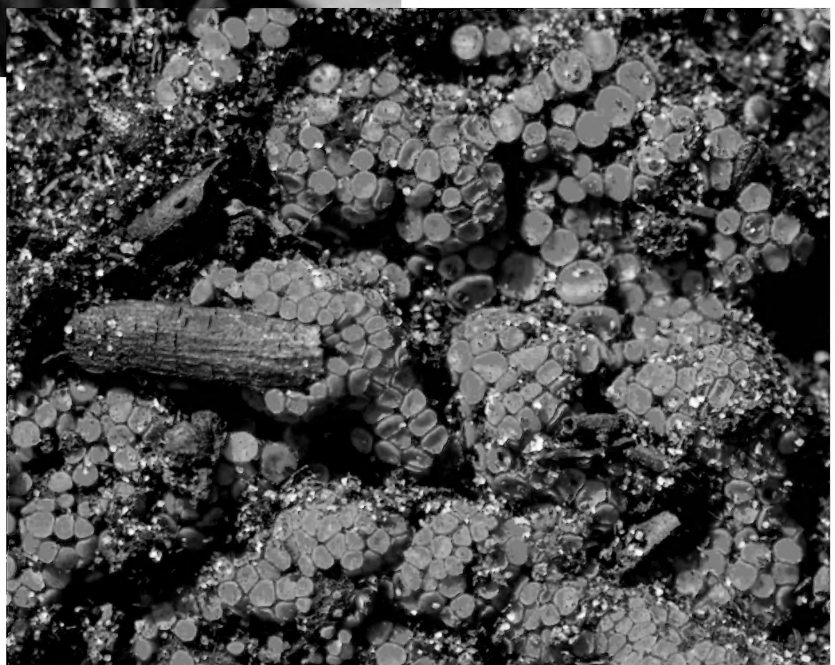
Report by Vireya Jacquard

Images Vireya, Carol H & Val H



Tall Sundew  
*Drosera auriculata*

*Anthrocobia  
muelleri*



### **“Wildlife disease surveillance”**

The Melbourne Veterinary School, Werribee, is currently conducting surveillance on diseases in wildlife, including Victorian koalas and bird populations in particular. Recent outbreaks of bird flu in captive chicken populations is a serious threat. Concerned people are asked to report mortality and any sick or dead animals to Wildlife Health Victoria. The direct contact person is Dr. Pam Whiteley on 0400 119 301 or on [pamw@unimelb.edu.au](mailto:pamw@unimelb.edu.au).

### ***Discovering Ballarat's Bushland Book Progress***

Two years ago a subcommittee was formed to prepare a second edition of our 2002 publication "Discovering Ballarat's Bushland". The first edition sold well and has been out of print - and out of date - for some time. Members have re-written the descriptions of the locations featured in the first book with some new ones added, totalling 37 sites. Today's technology has enabled us to include illustrations for each location and the map on the central double-page spread is now in colour. References refer to websites for maps, books and information centres.

Members of the subcommittee are now working with the Printer to prepare the book for publication. We estimate the book will be available later this year in early summer.

## **DISCOVERING BALLARAT'S BUSHLAND**

A guide to 37 natural  
places in the Ballarat region

Second Edition



Field Naturalists' Club of Ballarat

## **The Great Southern Bioblitz is Approaching**

**The 2024 Great Southern Bioblitz will take place from September 20th to 23<sup>rd</sup>.**

We are one of 82 areas across 21 countries in Africa, South America and Oceania participating to document the rich biodiversity of our regions using the iNaturalist platform. Spring is a time of exploding natural activity, making it the perfect time to observe and record the species around us.

Participating in GSB is an opportunity to contribute to citizen science, learn about local biodiversity, and connect with nature. Experienced field naturalists and curious beginners alike can join in. Observations can help scientists track species distribution, monitor changes in biodiversity, and contribute to global data that informs conservation efforts.

This year we are hoping to have a day Bioblitzing at Clarkesdale, as well as holding a moth night at a venue to be decided. There will be an opportunity at our September field trip to learn how to use iNaturalist or brush up on your existing skills.

Join our project here: <https://www.inaturalist.org/projects/great-southern-bioblitz-2024-ballarat-region> to stay informed about GSB events, and be part of this global experience.



## **Excerpts from Club Meeting Minutes 7.30pm, Aug 2nd 2024. Held in person and via Zoom**

### **Opening and Apologies**

Attendance: Acting Chair Neville Oddie welcomed 15 members and one visitor attending in person and nine members attending via Zoom.

Apologies: John Petheram, Angela Aldred, Andrew Grant, Wendy Bolger, Sheree Cartledge and Max Thompson.

**Guest Speaker:** “Terrestrial orchids: More questions than answers” was presented by BJ Johnson, convener of Ballarat U3A’s Orchid Class. Her wide-ranging talk covered topics like “how and where to find orchids” (including the things that affect their distribution), their growth requirements, genetic diversity, pollination & reproductive strategies, threats and human actions that can help protect and conserve them.

### **Business Arising from Previous Club Meeting on July 5th, 2024**

- Update: Since the Discovering Ballarat’s Bushland Sub-committee were successful with their application for \$2,000 in funding support requested from SEANA, Carol is working on getting an acceptable proof from the chosen printers.

- Neville, with some input from other members, prepared a Club submission on the State Government’s draft Wildlife (Game) Regulations, submitted 25<sup>th</sup> July. Thank you, Neville.

### **Business Arising from Correspondence:**

- We were offered a free promotional stall at the Ballarat Seniors Festival Expo on Tuesday 1<sup>st</sup> October from 10am – 2pm at the Mercure Convention Centre, 613 Main Rd, Ballarat. We have accepted the invitation and already have several volunteers (Peter & Claire, Val, Kathy and Emily). Please let Emily know if you are interested in manning the stand for any part of the time or preparing/ providing any material/ items for display.

- For everyone’s information, due to a long, upcoming trip, burgeoning commitments and family matters needing attention, John Petheram has sadly resigned from the FNCB Committee. Neville read Emily’s email of thanks and best wishes for John. We wish him all the best and look forward to photos and stories about his travels when he returns later this year. Some of his outstanding contributions include: La Gerche Trail sign project; Community-based Environmental Recording Project; Woowookarung RP Vegetation Monitoring Project; Spiny Rice-flower monitoring and

mapping at Skipton Common; provision of as much data as possible to Hepburn Shire Council re environmental, cultural and historic values and threats posed by existing and proposed Creswick Mountain Bike Trails, and the exceptional Creswick Goldfield Water Distribution Precinct Report for Heritage Victoria along with Lorraine Huddle and the late Kevin Tolhurst.

- Neville noted that there is now a vacancy on the Committee. Please contact a Committee member if you would like to join the Committee or learn more about what is involved.

## **Reports:**

### **Treasurer's Report**

Opening bal. as at July 5, 2024: \$9,189.06

Income \$35.00

Expenses: \$272.00

Closing bal.: \$8,952.06

Workshop to gather insights into environmental values of Woowookarung Regional Park: John G gave a brief report, noting that four FNCB members participated along with members of Friends of Canadian Corridor and local residents. Parks Victoria staff had prepared several questions so attendees broke into smaller groups to collate their answers. Parks Vic staff also highlighted the many achievements & improvements in the Park since it became a Regional Park eight years ago, one of the best being the closure of illegal trails.

## **General Business**

Sunday 4<sup>th</sup> August field trip, 9.30am – 4pm: “Comparing flora growth, particularly orchids, in differing landscapes in the Dereel area” to be led by BJ Johnson.

## **Show & Tell/ Field Reports**

Val showed photos of several fungi including Jelly Fungus, Vegetable Caterpillars (previously *Cordyceps*, now *Drechmeria gunnii*) and Black Tooth found on the most recent outing of the Ballarat U3A Orchid Class in the Dereel area.

Emily reported the exciting sighting of a Bare-nosed Wombat eating the tough, weedy grass Toowoomba Canary-grass (*Phalaris aquatica*) along the Linton-Piggoreet Rd roadside just west of Devil’s Kitchen. It has regularly been observed over the last two weeks from mid-afternoon through to dusk.

**Meeting closed: 8.46pm.**

**ANGAIR Wildflower and Arts Weekend on September 21st-22nd, 2024** in Anglesea. As always, there will be plant displays and sales, books, art and guided walks through some of their beautiful heathlands and forests.

10am – 4pm Anglesea Memorial Hall McMillan Street, Anglesea  
Visit online at: [www.angairnatureshow.org.au](http://www.angairnatureshow.org.au)

**SEANA Marysville 25th –27th Oct 2024**  
**SEANA Ballarat 17-19th October 2025 proposed**

**Our Next Club Meeting Friday 6th Sept at 7.30 pm**

in person at the Federation Uni, Gillies st or via Zoom if you prefer.  
Speaker “*The Moorabool River*” to be presented by Cameron Steele, People for a Living Moorabool (PALM).

*Cameron is a waterways advocate who lives in Bannockburn and is one of the founding members of People for A Living Moorabool, the group formed in response to the Millenium Drought and has been a constant voice in seeking to have more water left in the Moorabool River.*

*He is also a member of the Concerned Waterways Alliance, a collective of river groups across southern Victoria*

Elva has kindly offered to write up a report

**7th August field trip- 9.30am – 4pm: “Clarkesdale Bird Sanctuary: iNaturalist training session, bird and orchid-walk”** to be led by Vireya Jacquard, Graeme Lunt and Emily Noble.  
Meet in the Fed. Uni. carpark on the corner of Gillies St and Gregory St for carpooling/ convoy and departure at 9.30am sharp  
OR meet at the Clare Miller Environment Centre at Clarkesdale Bird Sanctuary at 10.10am if you would like to attend the iNaturalist training session. If not, arrive at 11am for BYO morning tea before a bird/ orchid walk. We’ll have lunch at the Environment Centre from 1-1.30pm then head out for another gentle walk. Upon our return at about 3.30pm, there will be an opportunity to practice uploading some photos taken on the day to iNaturalist.

Bring the device you use for iNaturalist if portable, weather-appropriate clothes and clean, sturdy shoes are recommended. Bring water, small mirror, camera, magnifying lens, binoculars, field guides, morning tea, lunch, thermos and camp chair

**We still need a volunteer to write up this event for the Newsletter please!**



## Meetings and Excursions

**Fri Sept 6th** *Speaker* Cameron Steele, People for A Living  
Moorabool (PALM) *The Moorabool River*

**Sat Sept 7th** Clarksdale Bird Sanctuary that will include optional sessions for iNaturalist training/ support at the beginning and the end of the day in the Clare Miller Environment Centre

### *Future events*

**Fri Oct 4th** Siobhan Rogan from Parks Victoria. "Parks Victoria priorities and activities in the region".

**Sun Oct 6th** Orchid and Enfield Grevillea hunt in Enfield State Park, Enfield

*Volunteers needed to write up these events for our newsletter.*

**Next Committee meeting** Tues Sept 24th at 7.30 pm by Zoom

**Club meetings are normally held on 1st Friday of the month at  
7.30 pm at the Federation Uni Gillies St Campus (corner of  
Gillies and Gregory Sts, Lake Wendouree),  
Committee**

**Website:** <http://fieldnatballarat.wordpress.com>

**Club email:** [ballaratfnc@gmail.com](mailto:ballaratfnc@gmail.com)

**Meetings** - in person and may continue to be held via Zoom.  
Members will be kept informed of arrangements each month.

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